

Notice of Allowability

Application No.

10/767,387

Applicant(s)

TIEN, DER-YANG

Examiner

NASIR SHAHRESTANI

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/30/2008.
2. ☒ The allowed claim(s) is/are 8-11.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Joseph A. Sawyer, Jr. (Reg. No. 30,801) on 2/11/2008.

The application has been amended from the claim set dated 11/21/2007 as follows:

Listing of Claims:

Claims 1-7 (Cancelled)

8. (Currently Amended) A method for leading macromolecule substances into living target cells, comprising:
picking up three-dimensional (3D) structure images of a tissue or organ where the target cells ~~locate~~ are located;
picking up 3D blood vessel photographic images of the tissue or organ where the target cells ~~locate~~ are located;
merging the 3D structure images into the 3D blood vessel photographic images,
choosing a blood vessel passage fully covering the target cells for transmitting the macromolecule substances;

injecting synthetic blood by using a pipe along the chosen blood vessel passage, ~~energy being exerted for forming~~ exerting energy to form non-permanent holes in cell membranes of the target cells; wherein the synthetic blood forms tiny bubbles around the target cells, thereby increasing the permeability of the target cells, and wherein the synthetic blood has a small volume such that the chosen blood vessel passage is not jammed; and

injecting the macromolecule substances into the target cells through the non-permanent holes in cell membranes along the chosen blood vessel passage.

9. (Original) The method as claimed in claim 8, wherein the energy exerted for forming non-permanent holes in cell membranes of the target cells is an ultrasonic wave having an intensity of at least 1 Mpa.
10. (Original) The method as claimed in claim 8, wherein the macromolecule substances are is injected into the target cells by using a pipe.
11. (Original) The method as claimed in claim 9, wherein the step of the macromolecule substances being injected around the target cells by using a pipe is performed before the forming of the non-permanent holes in cell membranes of the target cells.

Claims 12-29 (Cancelled)

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: In summary, the prior art of record does not teach not fairly suggest a picking up images and merging them to locate target cells and a method to inject synthetic blood into the living target cells, exert energy and increase permeability of said target cells, as has been presented in the claim language.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NASIR SHAHRESTANI whose telephone number is (571)270-1031. The examiner can normally be reached on Mon.-Thurs: 7:30-5:00, 2nd Friday: 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. S./

Examiner, Art Unit 3737

/Brian L Casler/

Supervisory Patent Examiner, Art Unit 3737